1.1 **GENERAL**

1.2 **Coordination Requirements**

   .1 Coordinate with SFU Facilities
   .2 Coordinate with other design disciplines.

1.3 **Description**

   .1 SFU requirements for cleaning air handling and exhaust systems.

2.1 **MATERIAL AND DESIGN REQUIREMENTS**

   .1 When applicable, follow the latest LEED procedures regarding air system cleaning.

   .2 All air systems altered or installed by this project shall be cleaned by a Cleaning Sub Trade employing high capacity cleaning equipment specifically designed for the work and operated by trained personnel.

   .3 The following air systems shall be cleaned as specified by the Engineer:

      .1 Relief.
      .2 Exhaust.
      .3 Supply.
      .4 Air Conditioning.
      .5 Return.

   .4 Components as specified by the Engineer within each system shall be thoroughly cleaned to the Engineer's satisfaction and shall include but not be limited to the following:

      .1 Intake and relief louvers.
      .2 Bird screens.
      .3 Auto dampers, back draft dampers.
      .4 Filter frames.
      .5 Coils.
      .6 Fans and motors - complete assembly.
      .7 All plenum surfaces.
      .8 Silencers.
      .9 Terminal reheat coils.
      .10 Supply air grilles, registers and diffusers.
      .11 Ductwork.
      .12 Mixing boxes, VAV boxes.
      .13 Return, exhaust and relief air grilles and diffusers.

.4 **Access and Shut Down Requirements**

   .1 Where none exist the cleaning sub trade shall provide access as required for the work and shall reseal and make good any duct or insulation damaged in the process of this work to the same standard as existing insulation.

   .2 Air systems must not be shut down without prior approval from the owner.

.5 **Cleaning**

   .1 On new construction or renovation projects, the ductwork shall be cleaned whenever practical before the air systems are balanced.
.2 On energy conservation retrofit projects, the ductwork shall be cleaned before any work is undertaken on the air path - modifications, repairs, calibrations, balancing, etc.

.3 Remove cheesecloth from grilles, diffusers, registers, etc., left over from the temporary use of the air systems.

.4 All balancing damper positions shall be marked before cleaning and returned to their original position when cleaning is completed unless the system is to be balanced.

.5 Cleaning shall generally be by high capacity power vacuum. High pressure compressed air or wire brushing. Non-toxic solvent cleaning shall be used where dirt or scale cannot be removed otherwise. Coils shall be de-scaled.

.6 Re-install any grilles, registers and diffusers, which may have been removed for cleaning purposes.

.7 Air Filters

.1 On new construction projects the Cleaning Sub Trade shall remove the temporary filters and supply and install new filters as specified in the contract documents after cleaning the air systems.

.2 After cleaning existing air systems, the Cleaning Sub Trade shall replace existing filters with new filters as specified in the documents.

.8 Debris Removal

.1 All trash - old filters, boxes, insulation, etc., shall be removed from the site as set out in Division 1.

.9 Report

.1 After completion of the work, the Sub Trade shall provide to the Contractor four copies of a certificate stating that all systems have been cleaned as specified and that all access panels for all cleaning openings are in place. This certificate shall be placed in the Operating and Maintenance Manuals.

.10 Access Panels

.1 Label all new access panels. Refer to Section 20 00 08 Mechanical Identification for label specification.

***END OF SECTION***